

**Course Description and Outline**  
**PHYSIOLOGY and PHARMACOLOGY 4980E**

**Academic year: 2018-2019**

***COURSE ADMINISTRATION***

**Managers:**

Dr. Angela Beye	MSB 207	661-3543	abeye2@uwo.ca
Dr. Anita Woods	MSB 208	661-4007	anita.woods@uwo.ca

***COURSE OBJECTIVES***

Physiology/Pharmacology 4980 is a major laboratory and tutorial course in experimental physiology and pharmacology. In this course, you will learn about laboratory research and communication in science. Following completion of this course, students will be able to:

1. Work independently or collaboratively on a research project in a specific area of physiology and/or pharmacology where the project includes literature review, experimental design, collection, analysis, and interpretation of results and the writing of a scientific report in a journal manuscript format (“the thesis”).
2. Perform the experimental procedures and operate the scientific equipment relevant to the research project.
3. Organize and present the results of the research project in a 15-minute oral presentation and a scientific poster.
4. Attend various research seminars (Mondays at 3:30 PM) and write a brief lay summary about the research findings to communicate with a general audience.

***COURSE CONTENT***

**Research Project:** After consultation with faculty members during the interview day, students will select their top 4 choices for research supervisors. The 4980 course managers will assign students to work in a research laboratory for the academic year. Students will be given appropriate instruction in techniques used in the laboratory and will be supervised in carrying out a research project, involving literature review, experimental design, collection and analysis of data, and interpretation of data. Research projects may take the form of relatively independent work or may involve collaboration in ongoing projects in that laboratory. It is expected that students will spend 15 hours in the laboratory each week. A discussion with your supervisor on lab attendance should be set up within your first week in the lab.

**Classes:** This portion of the course will emphasize critical analysis and communication in science. Students will meet throughout the year at assigned times for instruction and practice in these aspects of scientific research. The following activities will be supervised by the course manager / course committee members and faculty members in the department:

1. Instruction on how to give a seminar/scientific presentation
2. Instruction on how to prepare and present a scientific poster
3. Instruction on how to write scientifically for a general audience (lay summary)
4. Instruction on how to prepare an abstract for a research project
5. Instruction on how to analyze data and choose appropriate statistical tests
6. Presentation of final results of the research project at a poster session (second term)
7. Submission of the final results of the research project in the form of a scientific paper (second term)

## **EVALUATION**

A summary of each evaluation is detailed below. In brief, students will be evaluated by their supervisor on their performance in the laboratory. This will include not only technical skills, but also their familiarity with the scientific literature and their contribution to the experimental design, analysis, and interpretation of the data. This evaluation will be done at two times during the academic year. The first evaluation will be done at the end of the first term and is designed to inform the student on his/her progress to date. The second evaluation will be done at the end of the second term. We will provide you with the marking sheet so that you may see the evaluation criteria.

For written work, the scientific paper (“thesis”) will be evaluated by the supervisor and one other faculty member chosen by the course managers. Peer evaluations will also be completed on sections of the paper, submitted throughout the year, to help you improve your writing. Supervisors will not assist you in writing your thesis. Students will be evaluated on their other written assignments, as well as their oral presentations, throughout the year by the course committee members and other faculty involved in the scheduled meetings. All faculty members will participate in evaluation of student performance at a poster session at the end of the second term, where students will

present the results of their projects. Feedback will be given to students as soon as possible after presentations.

**Student participation in the oral presentation sessions is expected. Attendance at all activities is required.** If you are unable to attend a particular session, the usual University requirements for absence apply and you should inform the course managers as soon as possible.

Lastly, this course has a number of deadlines. **These deadlines are real.** Late assignments will be **docked 20% per day**. In addition, following instructions properly on each assignment submission is very important. This includes submitting assignments in the correct location, formatting the assignment correctly, as well as other details which will be clearly outlined for you for each assignment. A deduction of 10% from the assignment will be applied for not adhering to instructions. If peer reviews aren't completed as per instructions, the deduction will be applied to the reviewer's participation and attendance mark. Failure to attend classes and seminars will result in a reduction in the participation and attendance mark.

## EVALUATION

Details of the evaluation are outlined below:

Activity	Weight	Evaluator(s)	Deadline
Written Proposal	5%	2 Faculty Members	Oct. 18th noon
Oral Presentation	10%	Supervisor + 1 Course Committee member	Week of Nov. 12th or Nov. 19th
Laboratory Performance (1st term)	10%	Supervisor	N/A
Laboratory Performance (2nd term)	10%	Supervisor	N/A
Thesis Draft 1	2.5%	2 Peer reviewers	Jan. 24th noon
Thesis Draft 2	2.5%	2 Peer reviewers	Mar. 21st noon
Lay Summary	10%	Course Committee member	Mar. 14th noon
Poster	15%	Supervisor + 2 Faculty members	April 1st noon
Research Paper (Thesis)	25%	Supervisor + 1 Faculty member	April 10th noon
Data analysis assignment	5%	Course Committee	Feb. 4th & 6th
Attendance and Participation	5%	Course Committee	N/A

*\*\*The department reserves the right to make adjustment to the grading scheme if deemed necessary\*\**

### Policy on Plagiarism

The Department of Physiology and Pharmacology strongly condemns plagiarism. Plagiarism is the "act or instance of copying or stealing another's words or ideas and attributing them as ones own." (Excerpted from Black's Law Dictionary, West Group, 1999, 7<sup>th</sup> ed. Pg 1170 and the definition used by Western's Scholastic Discipline

document). Plagiarism can be intentional or unintentional and regardless of intent, is a scholastic offence. It should be noted that self-plagiarism, plagiarizing ones own words for multiple assignments is subjected to the same penalty as plagiarizing another. Courses in Physiology and Pharmacology use turnitin, a similarity checking software embedded within OWL. We encourage all students to run their assignments through turnitin prior to submitting their reports for grading. Any report flagged as yellow (25-49% matching text), orange (50-74% matching text) or red 75-100% matching text) will be considered plagiarism (pending investigation by the instructor). It should be noted that a document could be plagiarized yet still pass the similarity check on turnitin. The **minimum** penalty for a first time plagiarism offence of any kind is a grade of zero on the assignment. In addition, details of the offence will be forwarded to Dean's office and stored. A second offence will carry a much stricter penalty in line with Western's Scholastic Discipline policies <http://www.westerncalendar.uwo.ca/2017/pg113.html>

### **Appeals Policy**

The Department of Physiology and Pharmacology follows the Western University student academic appeals policy ([http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#SubHeading\\_181](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#SubHeading_181)). All appeals to individual graded course components must be submitted to the course instructor within 3 weeks of the grade being released. All final course grade appeals must be received by June 30. You must first appeal to the course managers. If this appeal is rejected, then you can appeal to the Undergraduate Chair of the Department of Physiology and Pharmacology (Brad.Urquhart@schulich.uwo.ca). If this appeal is rejected, you may then appeal to the Assistant Dean of the Bachelor of Medical Sciences Undergraduate Education Committee (Candace.Gibson@schulich.uwo.ca).

You must have suitable grounds for appeal which may include: 1) appeal on medical or compassionate grounds; 2) appeal based on extenuating circumstances beyond your control; 3) appeal based on bias, inaccuracy or unfairness. All appeals must be accompanied by a detailed explanation along with supporting documentation. You should submit your appeal as an e-mail with a single attachment. If you have multiple supporting documents, you should merge them into a single document.